

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P332675

Luminaire Tested: **SA4XXDIP-C1195D365U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332675
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C1195D365U835-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

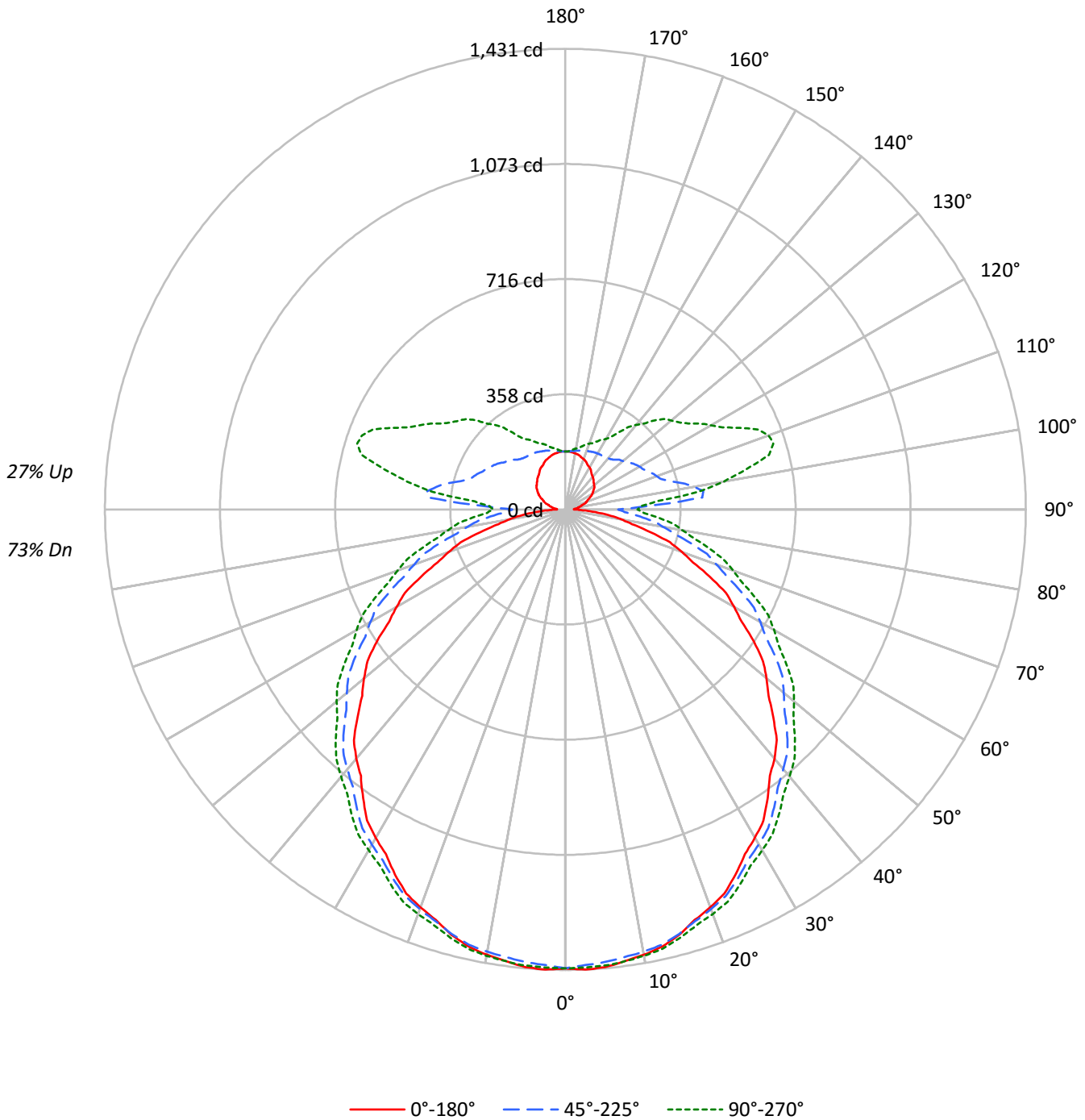
Lumens per Lamp: N/A
Luminaire Lumens: 6170.2 lumens
Efficiency: N/A
Efficacy: 123.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 49.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	113	113	113	113	107	107	107	107	96	96	96	86	86	86	77	77	77	73				
1	101	96	92	88	96	91	87	84	82	79	76	74	71	69	66	64	62	58				
2	92	83	76	70	87	79	73	67	71	66	62	64	60	56	57	54	51	48				
3	83	73	65	58	79	69	62	56	62	56	51	56	51	47	50	46	43	40				
4	76	64	55	49	72	61	53	47	55	49	43	50	44	40	44	40	37	34				
5	70	57	48	42	66	54	46	40	49	42	37	44	39	34	40	35	32	29				
6	64	51	42	36	61	49	41	35	44	37	32	40	34	30	36	31	28	25				
7	59	46	38	32	56	44	36	31	40	33	28	36	31	26	33	28	24	22				
8	55	42	34	28	52	40	32	27	37	30	25	33	28	24	30	25	22	20				
9	51	38	30	25	49	37	29	24	34	27	23	31	25	21	28	23	20	18				
10	48	35	28	22	46	34	27	22	31	25	20	28	23	19	26	21	18	16				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11512	11512	11512
5°	11547	11251	11283
10°	11477	11067	11058
15°	11374	10854	10794
20°	11219	10619	10537
25°	11044	10355	10254
30°	10854	10093	9964
35°	10640	9824	9710
40°	10469	9569	9445
45°	10215	9334	9218
50°	10000	9062	8977
55°	9778	8806	8695
60°	9431	8480	8438
65°	9051	8130	8122
70°	8591	7730	7753
75°	7950	7291	7421
80°	7239	6868	7093
85°	6329	6495	6901



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.0	2.2
10°-20°	386.9	6.3
20°-30°	585.0	9.5
30°-40°	707.8	11.5
40°-50°	748.3	12.1
50°-60°	704.2	11.4
60°-70°	584.3	9.5
70°-80°	410.4	6.7
80°-90°	233.0	3.8
90°-100°	267.7	4.3
100°-110°	372.4	6.0
110°-120°	310.7	5.0
120°-130°	242.4	3.9
130°-140°	186.6	3.0
140°-150°	133.2	2.2
150°-160°	91.2	1.5
160°-170°	53.7	0.9
170°-180°	17.5	0.3
0°-30°	1106.9	17.9
0°-40°	1814.7	29.4
0°-60°	3267.3	53.0
0°-90°	4495.0	72.8
90°-120°	950.8	15.4
90°-150°	1512.9	24.5
90°-180°	1675.0	27.1
0°-180°	6170.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1426	1426	1426	1426	1426	
5°	1428	1422	1412	1424	1423	135
15°	1368	1370	1365	1379	1378	385
25°	1252	1261	1266	1283	1285	576
35°	1095	1114	1130	1152	1158	686
45°	913	944	974	1000	1009	706
55°	715	750	797	828	838	637
65°	495	546	600	639	653	490
75°	275	334	401	444	460	292
85°	85	152	224	270	287	90
90°	26	93	164	210	225	17
95°	32	111	427	323	283	30
105°	56	108	337	643	655	60
115°	82	117	282	506	599	82
125°	108	128	250	412	466	96
135°	124	147	218	339	390	96
145°	140	159	203	262	294	88
155°	158	171	197	223	233	73
165°	172	177	189	200	203	49
175°	180	180	181	184	183	17
180°	180	180	180	180	180	



TEST NUMBER: P332675

CATALOG NUMBER: SA4XXDIP-C1195D365U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1431.1	1430.2	1429.4	1428.5	1427.7	1426.1	1423.8	1421.6	1419.3	1417.0	1419.0
5°	1427.5	1426.5	1425.4	1424.4	1423.3	1421.5	1419.0	1416.5	1414.1	1411.6	1414.4
7.5°	1415.4	1414.8	1414.1	1413.5	1412.9	1411.5	1409.5	1407.4	1405.3	1403.3	1406.5
10°	1405.2	1404.8	1404.5	1404.1	1403.8	1402.7	1400.9	1399.2	1397.4	1395.6	1398.8
12.5°	1391.1	1391.1	1391.0	1390.9	1390.9	1390.2	1389.0	1387.8	1386.6	1385.4	1388.3
15°	1368.5	1368.8	1369.2	1369.5	1369.9	1369.5	1368.5	1367.4	1366.3	1365.3	1368.5
17.5°	1337.5	1338.6	1339.6	1340.7	1341.7	1342.2	1342.0	1341.7	1341.5	1341.3	1344.6
20°	1315.8	1316.8	1317.9	1319.0	1320.0	1320.7	1321.1	1321.5	1321.8	1322.2	1325.7
22.5°	1291.5	1292.8	1294.2	1295.5	1296.9	1297.9	1298.5	1299.2	1299.8	1300.4	1304.0
25°	1251.9	1254.0	1256.2	1258.3	1260.4	1262.0	1263.1	1264.1	1265.2	1266.3	1270.2
27.5°	1207.8	1211.0	1214.1	1217.2	1220.3	1222.7	1224.3	1226.0	1227.6	1229.2	1232.8
30°	1178.4	1181.3	1184.1	1187.0	1189.8	1192.5	1194.9	1197.4	1199.9	1202.4	1206.3
32.5°	1146.5	1149.9	1153.3	1156.7	1160.1	1163.2	1166.0	1168.8	1171.5	1174.3	1178.8
35°	1095.4	1099.7	1103.9	1108.2	1112.4	1116.3	1119.9	1123.4	1127.0	1130.5	1135.5
37.5°	1044.0	1048.9	1053.8	1058.7	1063.6	1068.2	1072.6	1077.0	1081.4	1085.8	1090.9
40°	1010.8	1015.4	1020.0	1024.6	1029.2	1034.0	1039.0	1044.0	1048.9	1053.9	1059.2
42.5°	972.5	977.6	982.8	988.0	993.2	998.7	1004.5	1010.3	1016.1	1022.0	1027.9
45°	913.4	920.1	926.9	933.6	940.3	947.1	953.8	960.6	967.3	974.1	980.1
47.5°	856.8	863.8	870.8	877.7	884.7	892.1	899.9	907.7	915.5	923.3	929.5
50°	816.0	823.8	831.6	839.4	847.2	855.0	862.8	870.6	878.4	886.2	893.3
52.5°	775.1	782.9	790.7	798.5	806.3	814.7	823.6	832.6	841.5	850.5	857.6
55°	715.4	722.8	730.3	737.7	745.2	754.2	764.9	775.5	786.2	796.8	803.9
57.5°	648.6	657.9	667.1	676.3	685.5	695.4	706.0	716.6	727.2	737.7	746.2
60°	605.2	614.4	623.6	632.9	642.1	652.6	664.3	676.0	687.7	699.4	707.6
62.5°	563.0	573.1	583.2	593.3	603.3	614.2	626.0	637.7	649.4	661.1	669.2
65°	495.0	506.4	517.7	529.1	540.4	552.1	564.2	576.3	588.3	600.4	609.3
67.5°	429.5	441.6	453.7	465.7	477.8	490.3	503.2	516.1	529.0	542.0	551.0
70°	384.8	396.9	409.0	421.0	433.1	445.9	459.3	472.8	486.3	499.8	509.4
72.5°	341.4	353.7	366.1	378.4	390.8	404.1	418.5	432.8	447.1	461.5	470.8
75°	274.7	287.8	300.9	314.0	327.2	341.2	356.1	371.0	385.9	400.8	410.7
77.5°	212.4	226.3	240.2	254.1	268.0	282.8	298.4	314.0	329.6	345.2	355.3
80°	174.1	188.2	202.4	216.6	230.8	245.7	261.3	277.0	292.6	308.2	318.8
82.5°	135.7	150.5	165.3	180.0	194.8	210.0	225.6	241.2	256.8	272.4	283.3
85°	84.6	99.5	114.4	129.3	144.2	159.7	175.6	191.6	207.6	223.6	234.2
87.5°	47.3	62.0	76.6	91.2	105.7	120.8	136.7	152.3	167.9	183.6	193.8
90°	25.9	40.8	56.1	70.6	85.2	99.9	117.3	132.5	148.5	164.4	174.4
92.5°	28.3	42.9	59.0	76.1	94.0	115.4	148.6	191.3	233.3	262.5	253.8
95°	32.4	45.2	60.4	76.7	96.9	124.9	170.2	242.7	341.7	427.0	444.7
97.5°	39.8	49.8	63.0	77.3	94.6	119.3	157.4	219.7	318.0	432.4	510.4
100°	44.4	53.7	65.4	78.8	94.8	117.6	152.3	206.1	292.0	405.5	505.6
102.5°	50.1	58.7	69.0	81.1	95.6	117.2	149.6	198.3	273.2	375.1	477.7
105°	55.7	63.9	72.7	84.1	97.5	117.9	148.0	190.5	253.1	337.2	429.2
107.5°	65.2	71.7	79.3	89.6	101.5	120.7	148.7	187.8	242.5	312.1	388.7
110°	70.4	76.1	82.8	92.0	103.3	121.6	149.5	186.7	238.0	301.7	367.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	75.3	80.4	86.9	95.2	106.0	123.7	150.5	185.7	233.9	292.7	352.0
115°	82.4	86.6	92.3	99.0	108.9	125.8	151.3	183.8	228.0	281.8	334.1
117.5°	91.4	94.3	98.4	104.2	112.4	128.6	152.6	182.7	222.7	271.9	320.5
120°	96.3	98.1	101.7	106.6	113.7	129.2	153.0	181.6	219.1	265.5	311.8
122.5°	102.0	102.9	105.6	109.4	116.2	130.8	153.9	180.9	215.9	258.8	303.2
125°	107.8	108.9	110.6	114.2	120.5	134.7	156.3	181.4	212.6	250.4	291.1
127.5°	114.1	114.9	117.0	121.1	127.8	141.0	160.1	181.8	208.1	240.0	276.1
130°	116.5	117.5	120.0	125.0	131.3	144.2	161.9	181.4	205.1	233.4	266.6
132.5°	120.1	120.9	124.2	128.9	135.8	147.6	164.2	182.2	203.1	228.0	258.4
135°	123.7	125.1	128.7	134.7	142.1	152.5	166.7	181.9	198.9	218.3	244.5
137.5°	128.9	129.9	133.4	138.8	146.1	155.3	167.4	180.5	194.5	210.9	233.0
140°	132.5	133.3	136.8	142.4	149.5	158.0	168.9	180.6	193.0	206.8	226.6
142.5°	135.2	136.2	139.8	145.4	152.5	160.5	170.6	180.9	192.1	204.2	221.8
145°	140.5	141.2	144.4	149.0	155.3	162.9	172.1	181.7	191.9	202.9	216.3
147.5°	146.8	146.8	149.5	154.3	159.5	166.3	174.9	183.3	192.3	201.6	211.8
150°	150.7	150.7	153.2	157.1	162.0	168.6	176.4	184.1	192.3	200.7	209.6
152.5°	153.1	153.1	155.9	159.8	164.4	170.6	177.5	184.7	191.7	199.3	207.3
155°	158.0	158.3	160.5	164.0	167.9	173.2	179.2	185.2	190.9	197.2	203.9
157.5°	163.0	163.0	165.0	167.7	171.1	175.3	180.4	185.2	189.9	195.0	200.5
160°	166.1	166.1	167.5	170.0	172.8	176.7	181.0	185.2	189.1	193.3	197.9
162.5°	168.9	168.7	169.8	172.0	174.5	177.6	181.5	185.2	188.2	191.6	195.7
165°	172.1	172.1	172.8	174.6	176.4	178.5	181.7	184.5	186.6	189.1	191.9
167.5°	175.3	174.9	175.3	176.6	177.6	179.3	181.6	183.6	184.9	186.5	188.5
170°	176.7	176.4	176.7	177.8	178.5	179.5	181.3	183.1	183.8	184.8	186.3
172.5°	178.1	177.8	177.8	178.6	179.0	179.8	181.0	182.5	182.7	183.1	184.3
175°	179.5	179.2	179.2	179.5	179.9	179.9	180.6	181.7	181.3	181.3	182.0
177.5°	180.2	179.9	179.6	179.9	179.9	179.9	180.2	180.7	180.2	180.2	180.5
180°	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1421.0	1423.0	1425.0	1425.8	1425.5	1425.2	1425.0	1424.7
5°	1417.3	1420.1	1422.9	1424.2	1423.8	1423.5	1423.1	1422.8
7.5°	1409.7	1412.9	1416.1	1417.5	1417.1	1416.8	1416.4	1416.1
10°	1402.0	1405.2	1408.4	1409.8	1409.5	1409.1	1408.7	1408.4
12.5°	1391.2	1394.1	1397.0	1398.5	1398.4	1398.3	1398.2	1398.2
15°	1371.7	1374.9	1378.0	1379.5	1379.1	1378.8	1378.4	1378.0
17.5°	1347.9	1351.1	1354.4	1355.9	1355.6	1355.3	1355.0	1354.7
20°	1329.3	1332.8	1336.4	1338.1	1338.1	1338.1	1338.1	1338.1
22.5°	1307.5	1311.1	1314.6	1316.7	1317.3	1317.8	1318.4	1319.0
25°	1274.1	1278.0	1281.9	1284.0	1284.4	1284.7	1285.1	1285.4
27.5°	1236.5	1240.1	1243.7	1245.7	1246.2	1246.6	1247.0	1247.4
30°	1210.2	1214.1	1218.0	1220.3	1221.0	1221.7	1222.4	1223.2
32.5°	1183.2	1187.7	1192.2	1194.8	1195.5	1196.2	1196.9	1197.6
35°	1140.5	1145.4	1150.4	1153.4	1154.5	1155.6	1156.6	1157.7
37.5°	1095.9	1100.9	1106.0	1109.1	1110.2	1111.3	1112.5	1113.6
40°	1064.5	1069.9	1075.2	1078.6	1080.0	1081.4	1082.8	1084.2
42.5°	1033.7	1039.6	1045.5	1049.0	1050.2	1051.3	1052.4	1053.6
45°	986.1	992.2	998.2	1002.1	1003.9	1005.6	1007.4	1009.2
47.5°	935.8	942.0	948.3	952.4	954.6	956.7	958.8	961.0
50°	900.4	907.5	914.6	919.2	921.4	923.5	925.6	927.7
52.5°	864.7	871.8	878.8	883.5	885.6	887.7	889.8	892.0
55°	811.0	818.1	825.2	829.8	831.9	834.1	836.2	838.3
57.5°	754.6	763.1	771.5	776.7	778.7	780.7	782.7	784.7
60°	715.7	723.9	732.0	737.5	740.4	743.2	746.1	748.9
62.5°	677.4	685.6	693.7	699.2	702.1	704.9	707.7	710.6
65°	618.1	627.0	635.9	641.7	644.6	647.4	650.3	653.1
67.5°	560.0	569.0	578.0	583.9	586.7	589.4	592.2	595.0
70°	519.0	528.5	538.1	544.2	546.6	549.1	551.6	554.1
72.5°	480.1	489.4	498.7	504.7	507.5	510.2	513.0	515.8
75°	420.7	430.6	440.5	447.1	450.3	453.5	456.7	459.9
77.5°	365.4	375.5	385.5	392.3	395.7	399.1	402.5	405.9
80°	329.5	340.1	350.8	357.5	360.3	363.2	366.0	368.9
82.5°	294.3	305.2	316.1	323.2	326.3	329.4	332.5	335.6
85°	244.8	255.5	266.1	273.2	276.8	280.3	283.9	287.4
87.5°	204.2	214.6	224.9	231.6	234.8	238.0	241.1	244.2
90°	185.0	195.7	206.3	212.9	216.1	219.3	221.7	224.6
92.5°	239.8	232.7	232.0	231.4	230.0	231.0	232.6	235.4
95°	420.0	374.8	337.0	309.1	295.0	287.2	284.0	282.6
97.5°	534.5	523.5	498.2	467.5	445.2	426.9	419.4	415.1
100°	566.8	583.4	575.7	555.5	527.3	508.2	500.1	499.7
102.5°	557.8	602.2	616.5	611.6	595.5	582.7	574.3	574.8
105°	519.0	589.0	632.8	653.2	656.7	656.7	654.6	655.4
107.5°	469.1	542.9	600.9	638.1	658.1	668.7	674.8	678.2
110°	438.5	507.8	567.2	611.6	639.5	657.2	666.4	672.4



TEST NUMBER: P332675

CATALOG NUMBER: SA4XXDIP-C1195D365U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	413.7	475.7	532.0	576.2	607.5	628.3	640.1	648.1
115°	386.1	437.4	486.6	525.6	556.0	579.7	593.5	598.8
117.5°	366.9	410.3	450.2	484.1	510.7	531.4	545.7	550.7
120°	356.0	396.0	431.4	461.4	484.4	502.8	514.8	521.5
122.5°	346.2	385.1	417.9	444.7	464.3	480.1	490.5	496.9
125°	331.7	368.9	400.0	423.9	440.2	452.5	461.4	465.6
127.5°	314.4	349.8	380.5	403.4	420.0	431.5	439.6	444.1
130°	302.3	336.7	367.1	390.1	406.7	417.6	425.4	429.7
132.5°	290.7	323.1	352.6	375.5	391.8	403.9	411.4	415.7
135°	272.4	301.1	328.3	349.9	366.1	378.2	386.0	390.2
137.5°	256.7	281.3	304.6	324.1	339.1	350.6	357.0	361.4
140°	247.4	268.7	289.2	307.2	321.4	330.9	337.6	342.2
142.5°	239.8	258.5	276.2	291.8	304.2	312.9	318.8	322.3
145°	229.7	243.9	256.6	268.3	278.5	286.0	290.9	294.1
147.5°	221.5	231.3	240.1	248.5	256.2	262.5	266.3	268.1
150°	218.1	226.2	233.3	239.6	245.3	249.9	252.0	252.3
152.5°	215.0	222.0	228.5	233.7	238.5	242.2	243.5	243.9
155°	210.3	215.9	221.2	225.5	229.0	231.8	232.9	232.9
157.5°	205.3	210.0	214.5	217.9	220.5	222.7	223.3	223.3
160°	202.2	206.0	209.9	212.8	214.9	217.0	217.4	217.4
162.5°	199.1	202.4	205.4	208.0	209.5	211.6	212.0	211.7
165°	194.7	196.9	199.3	201.1	202.5	203.9	203.6	203.2
167.5°	190.6	192.2	194.2	195.2	195.9	196.9	196.8	196.5
170°	188.0	189.1	190.5	191.6	192.3	192.6	192.3	192.3
172.5°	185.8	186.5	187.4	188.2	188.6	188.9	188.6	188.0
175°	182.7	183.1	183.8	183.8	183.8	184.5	183.8	183.1
177.5°	180.7	181.0	181.0	181.3	181.0	181.3	180.7	180.2
180°	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9

(END OF REPORT)